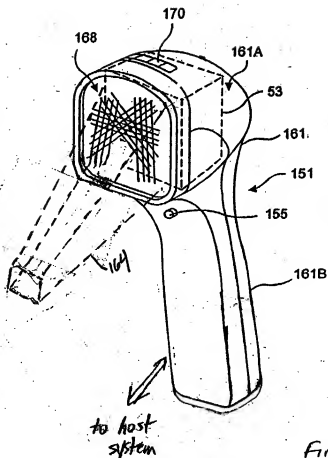


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First Generalized
Embodiment

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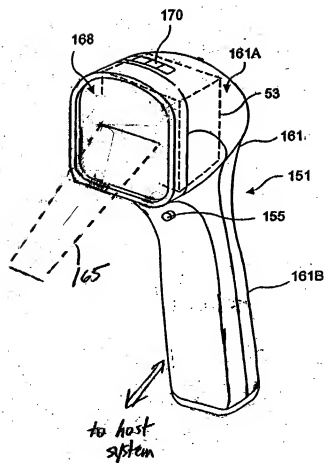
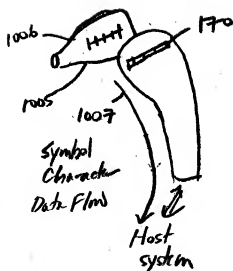


FIG. 1B

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OMNI-DIRECTIONAL
Mode

FIG. 2A

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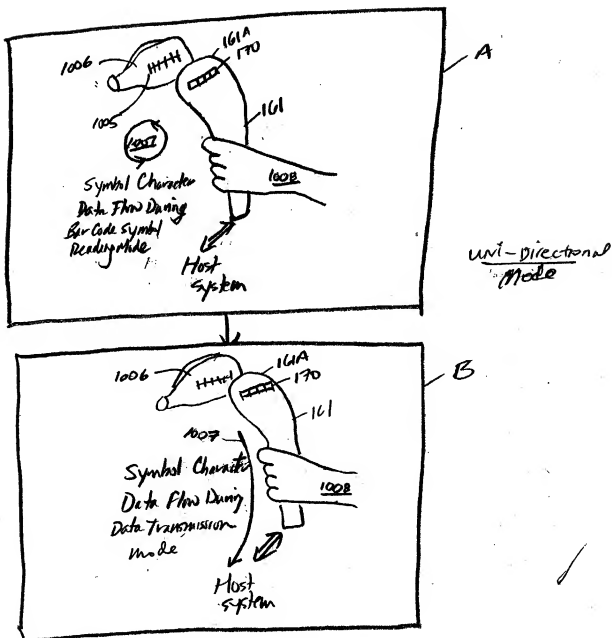


FIG. 2B

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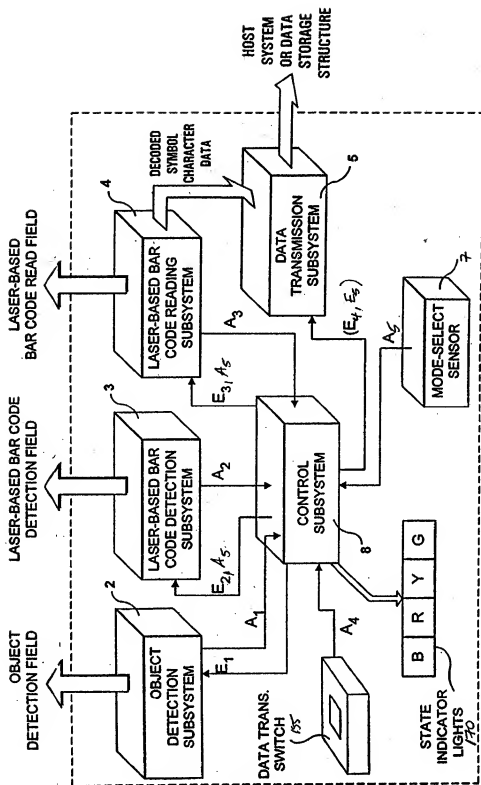


FIG. 3

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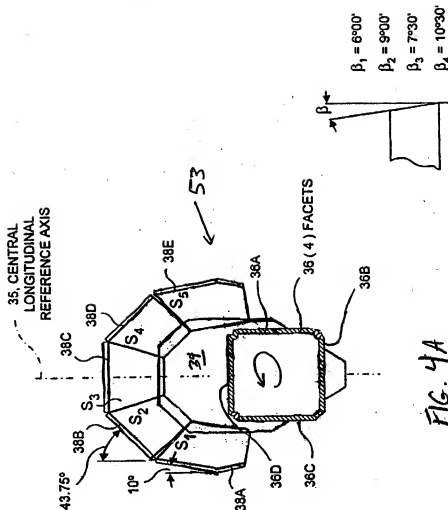


FIG. 4A

	TWIST α	BEND θ
S_{1-5}	10°	46.0°
S_{2-4}	43.75°	42.5°
S_3	90°	40.5°

FIG. 5B

FIG. 5A

$$\begin{aligned}\beta_1 &= 6^\circ00' \\ \beta_2 &= 9^\circ00' \\ \beta_3 &= 7^\circ30' \\ \beta_4 &= 10^\circ30'\end{aligned}$$

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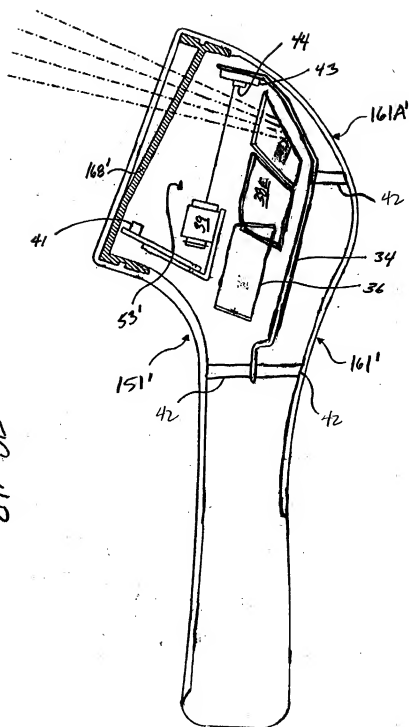


FIG. 4B

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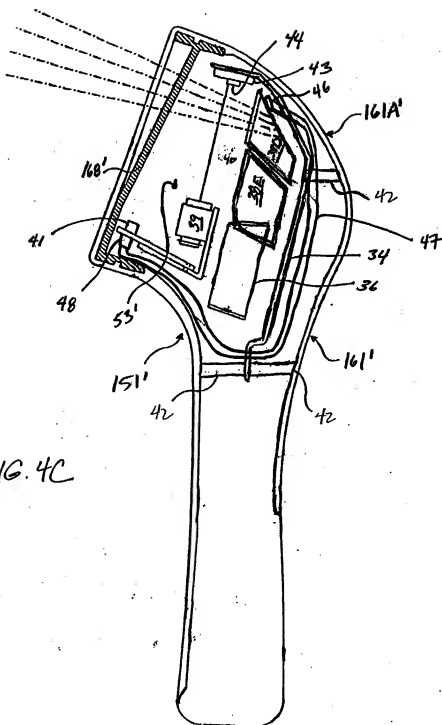


FIG. 4C

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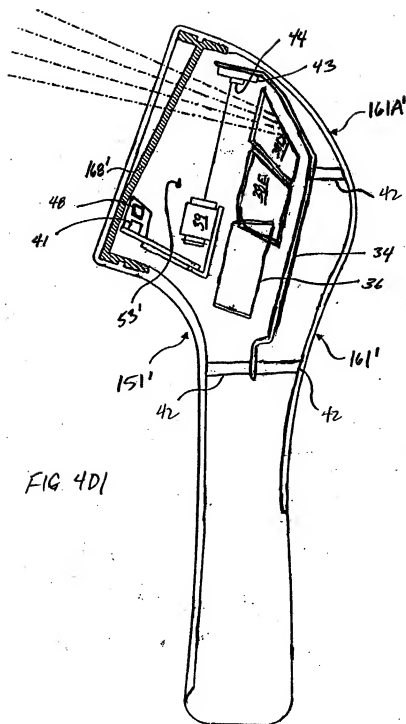


FIG 4D1

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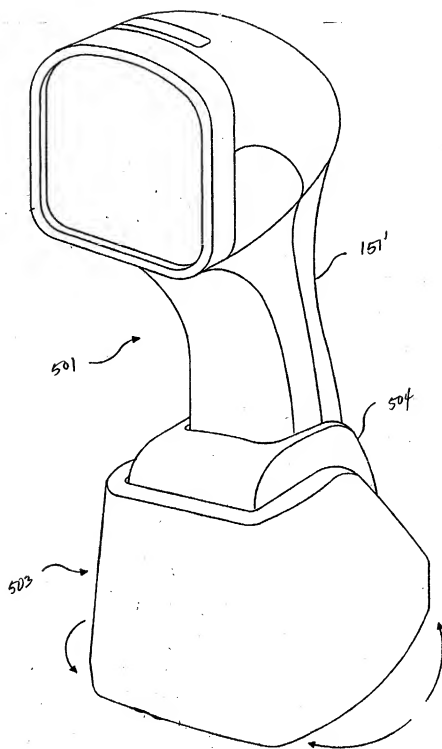


FIG. 5A

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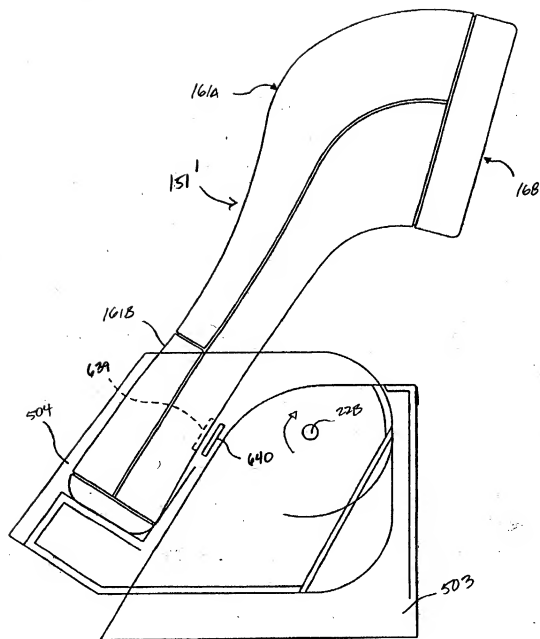
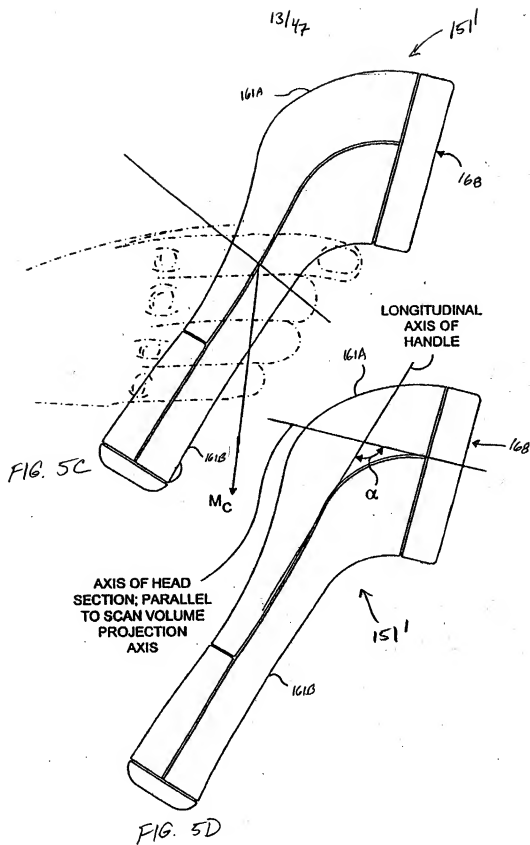


FIG. 5B



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157'

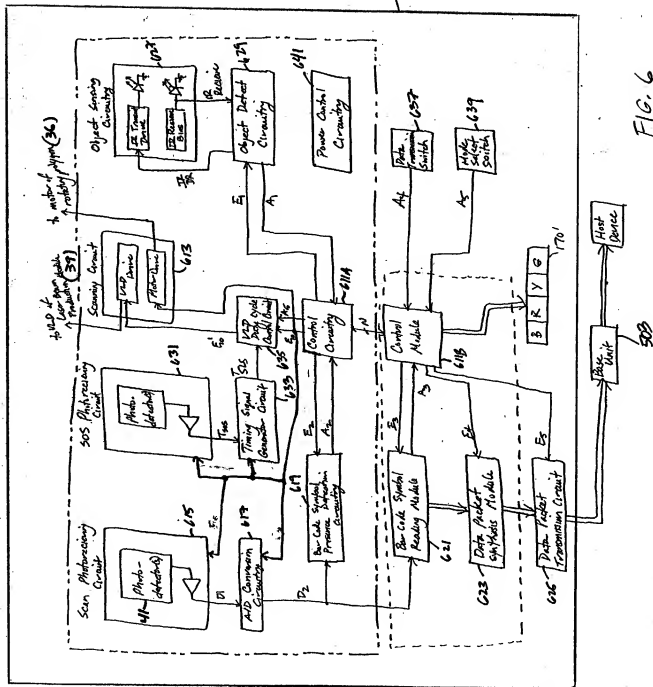


FIG. 6

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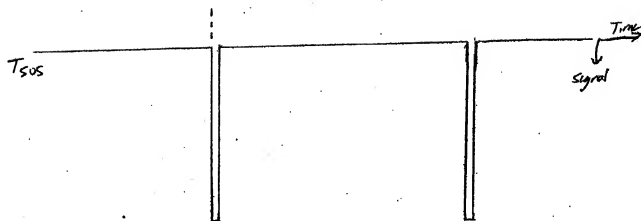


FIG. 7A

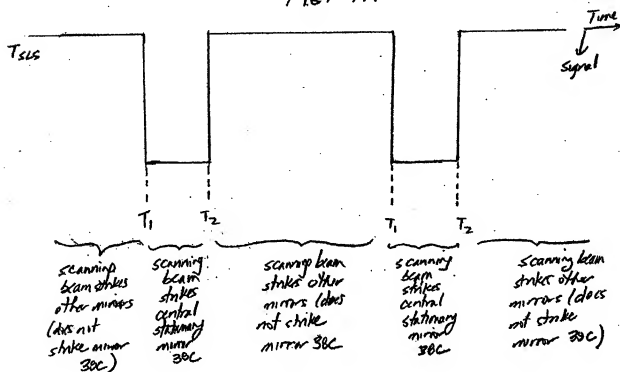
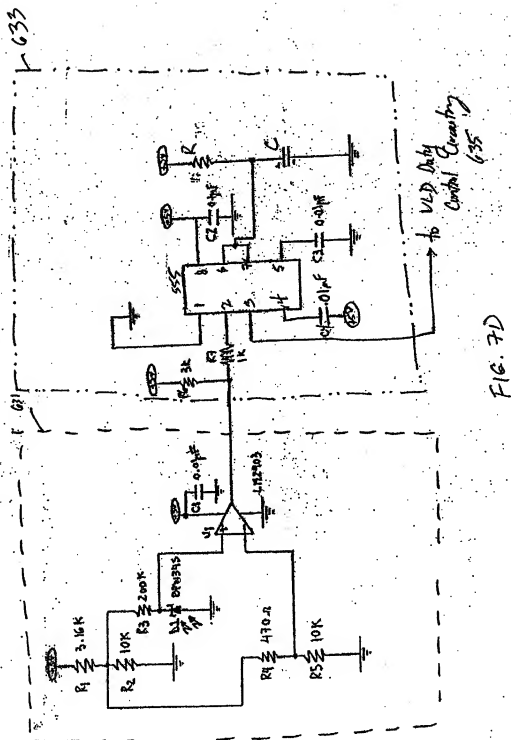


FIG. 7B

$$E_{10}' = (\overline{T_{SLS}} \cdot E_{10} \cdot A_S) + (E_{10} \cdot \overline{A_C})$$

FIG. 7C

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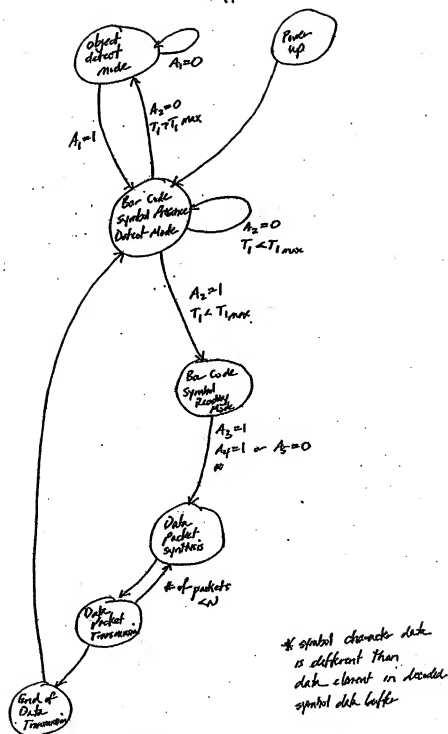


FIG. 8

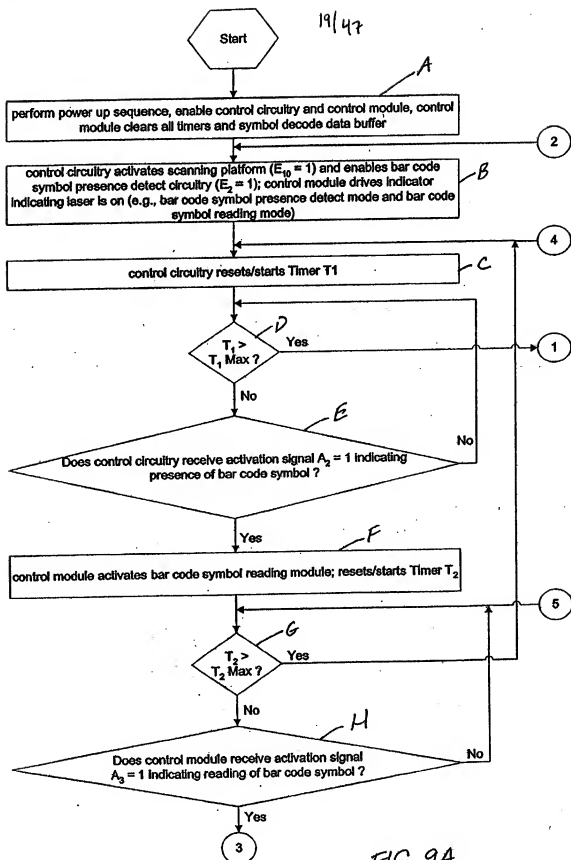
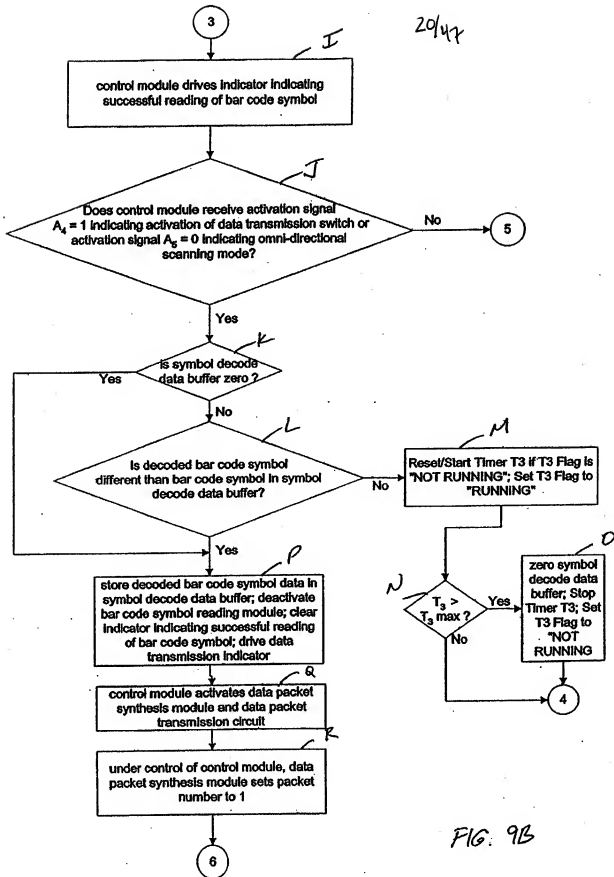


FIG. 9A



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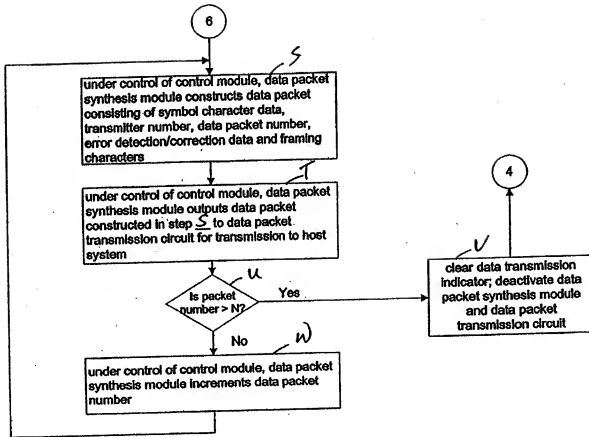


FIG. 9C

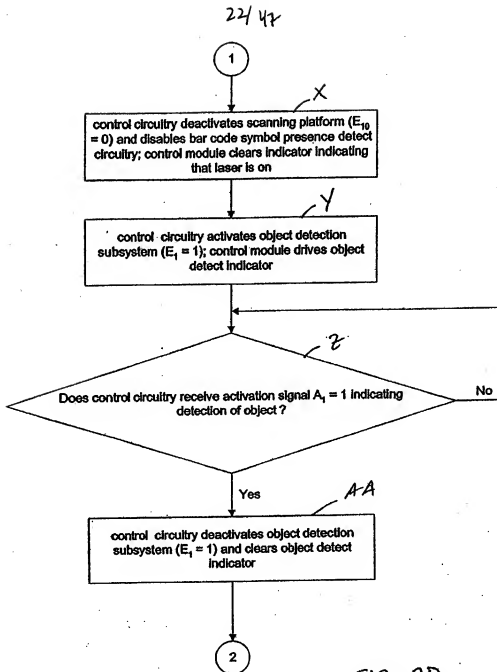
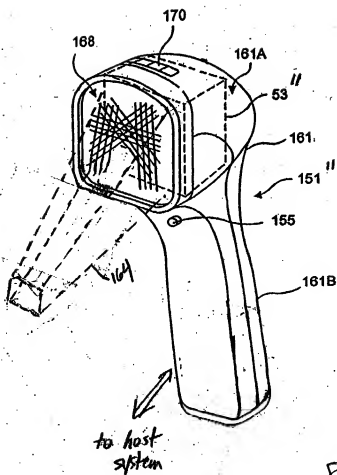
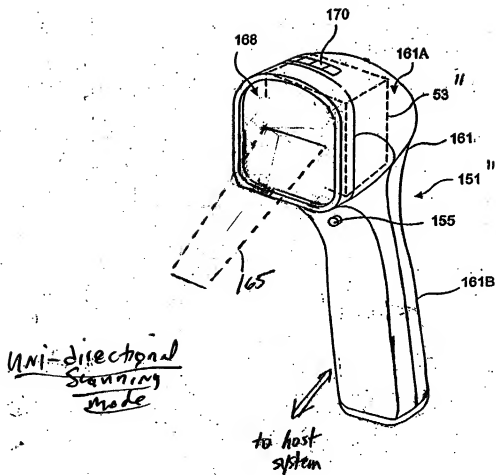


FIG. 9D

$23 \mid 47$ 

Second -
Generalized
Embodiment

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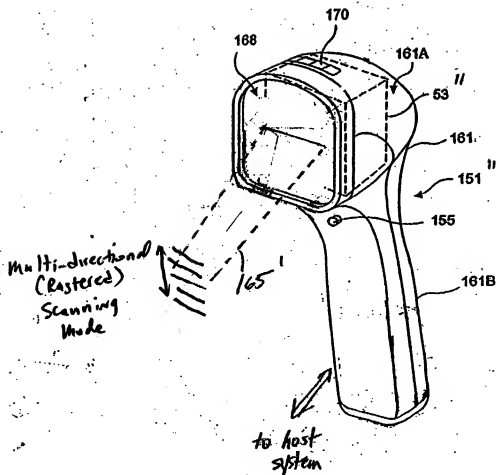


FIG. 10C

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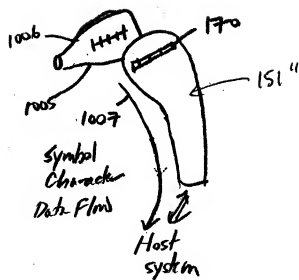
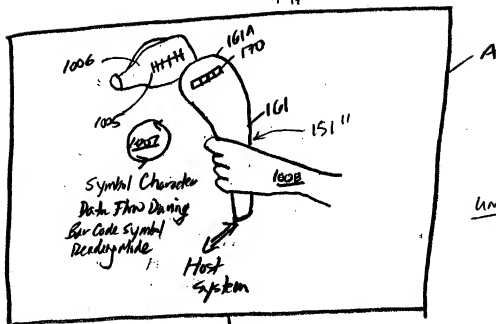


FIG. 11A

271 47



uni-directional
and
multi-directional
modes

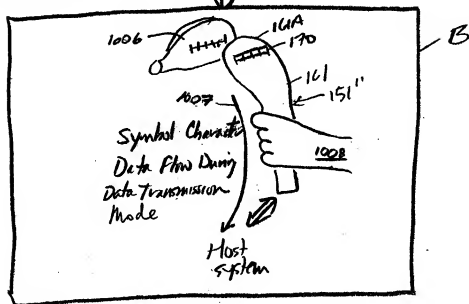


FIG. 11B

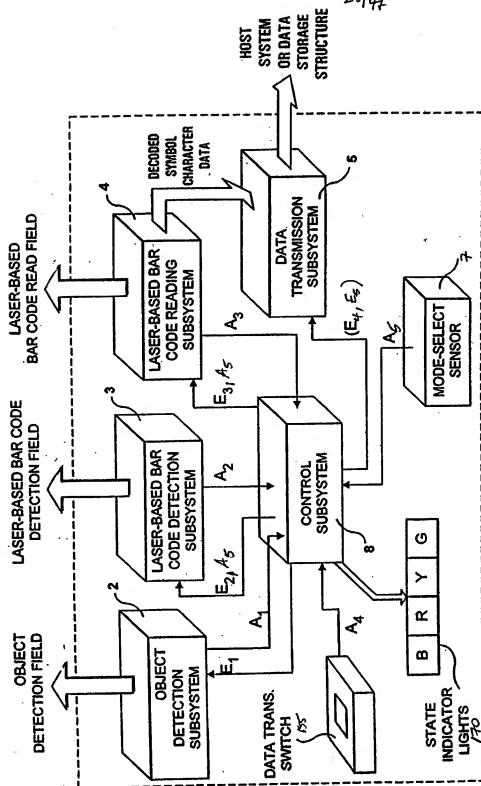


FIG. 12

57 11

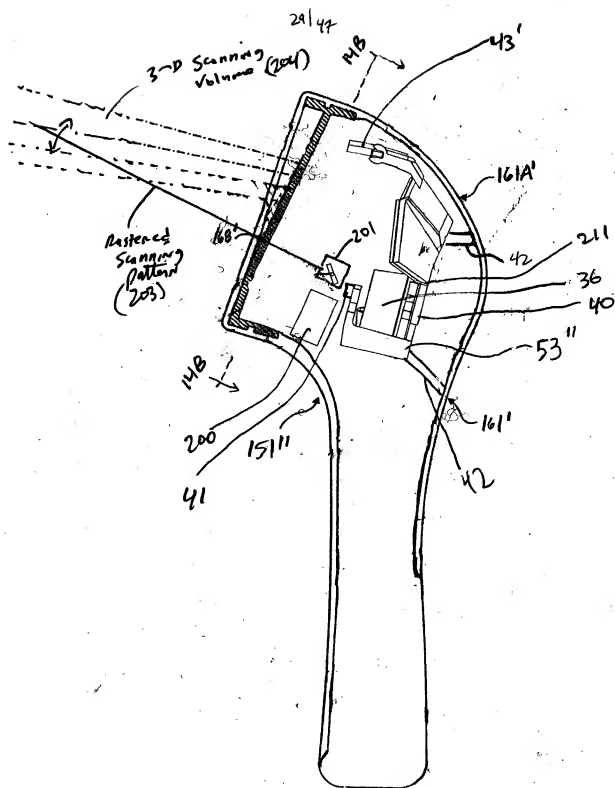
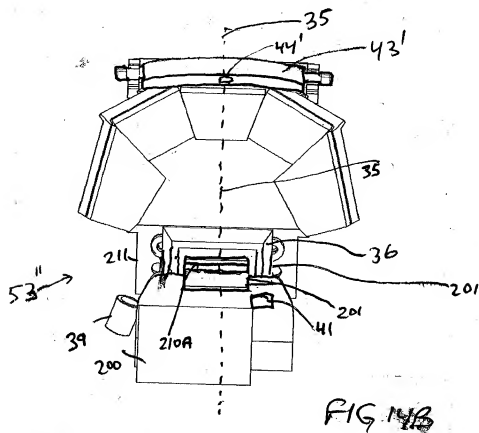
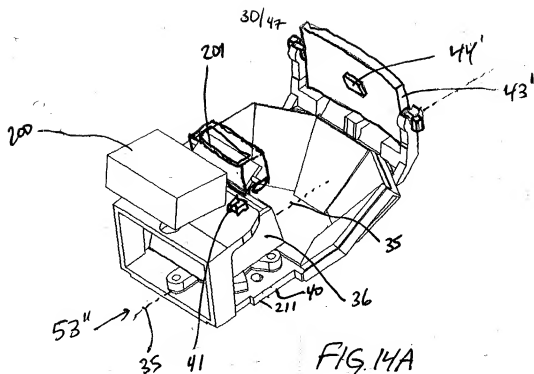


FIG. 13



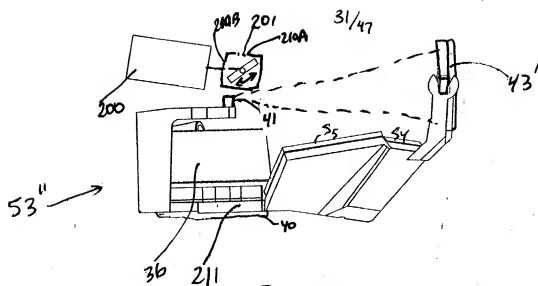


FIG. 14C

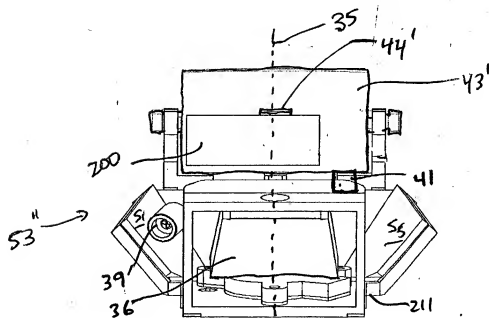


FIG. 14D

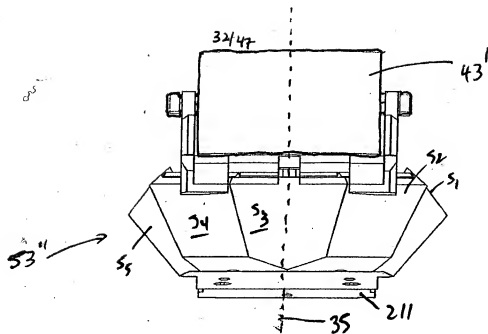


FIG. 14E

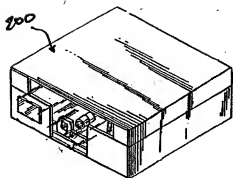


FIG. 14F

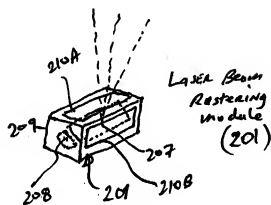


FIG. 14G

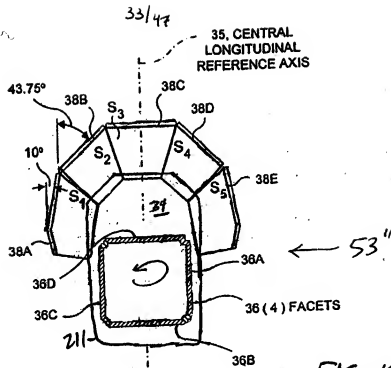


FIG. 15A

Optics Bench Array Mirror
Specifications

Mirror	Relief Angle	Twist Angle
	Degrees	
1	45.91	69.32
2	47.85	34.15
3	48.4	0
4	47.85	34.15
5	45.91	69.32

Mirror	Length	Width
	Millimeters	
1	19.872	17.303
2	16.341	13.746
3	16.67	15.788
4	16.341	13.746
5	19.872	17.303

FIG. 15B

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Angles Specification:

Definitions:

Relief Angle - The angle between the plane including all the bottom front edges of the array mirrors and the front surface of the mirror being measured.

Twist Angle - The angle of rotation about the z-axis with 0 degrees twist being defined as perpendicular to the incident beam (field 3)

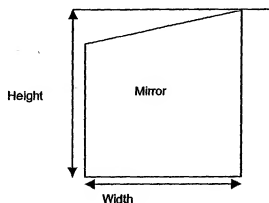


FIG. 15C

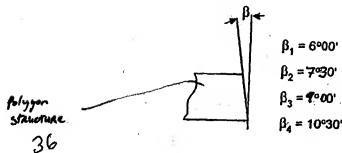
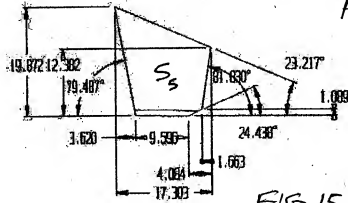
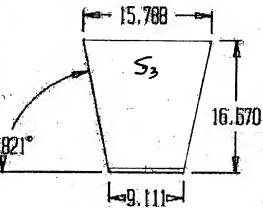
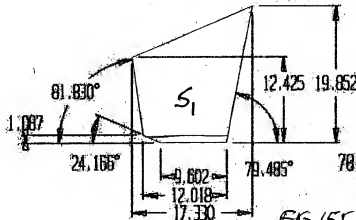
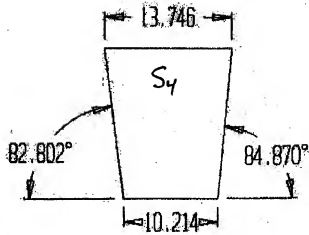
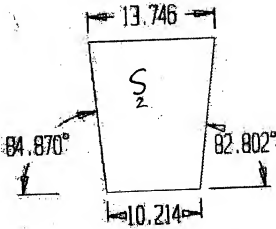


FIG. 15D

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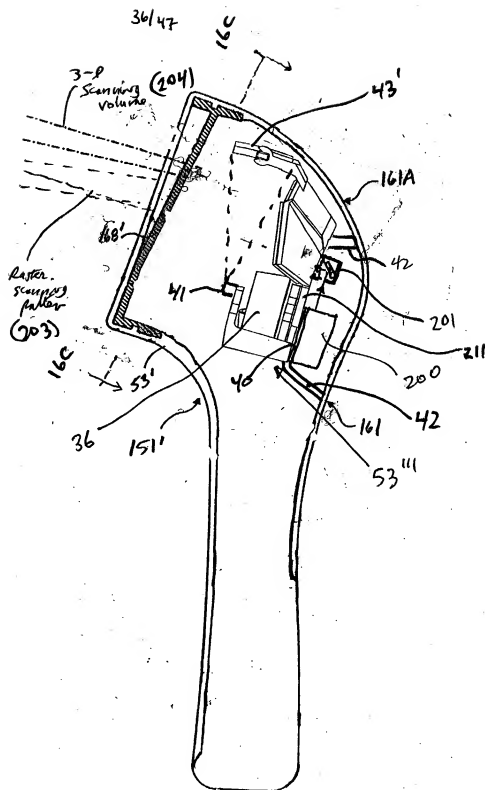
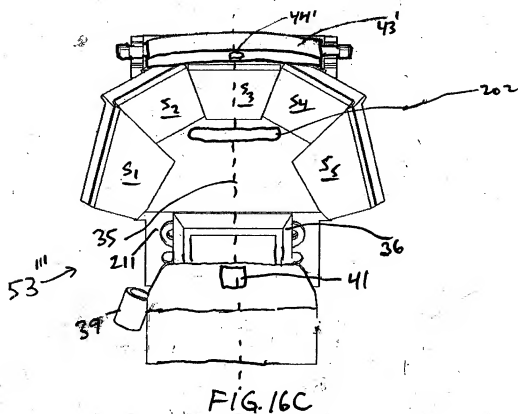
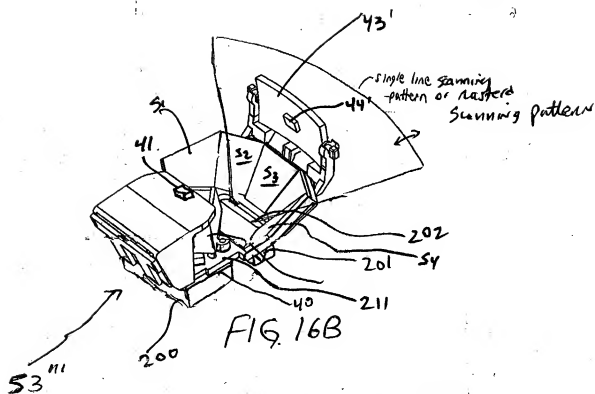
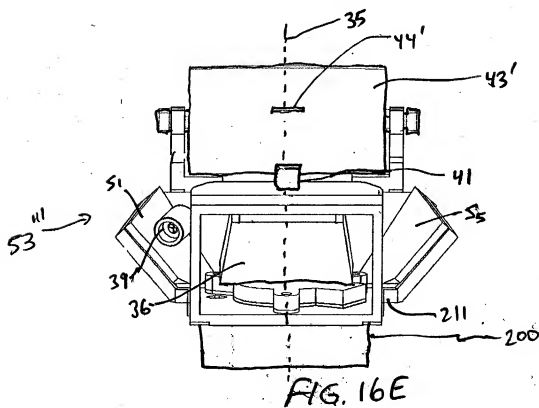
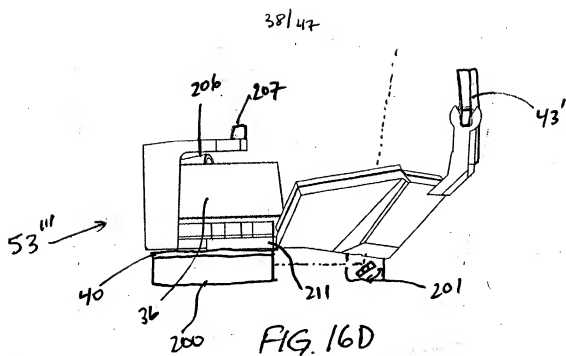


FIG. 16A

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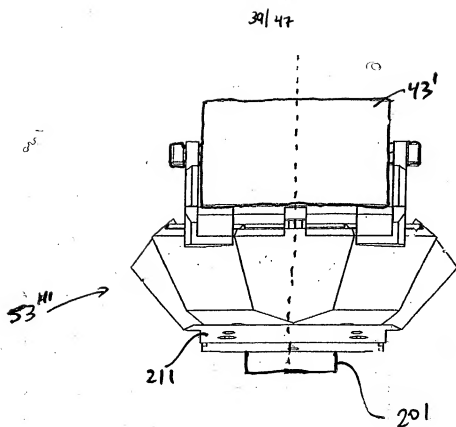


FIG. 16F

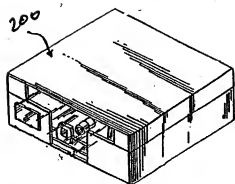


FIG. 16G

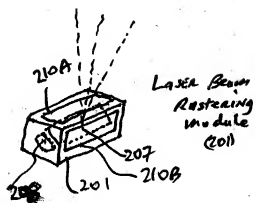


FIG. 16H

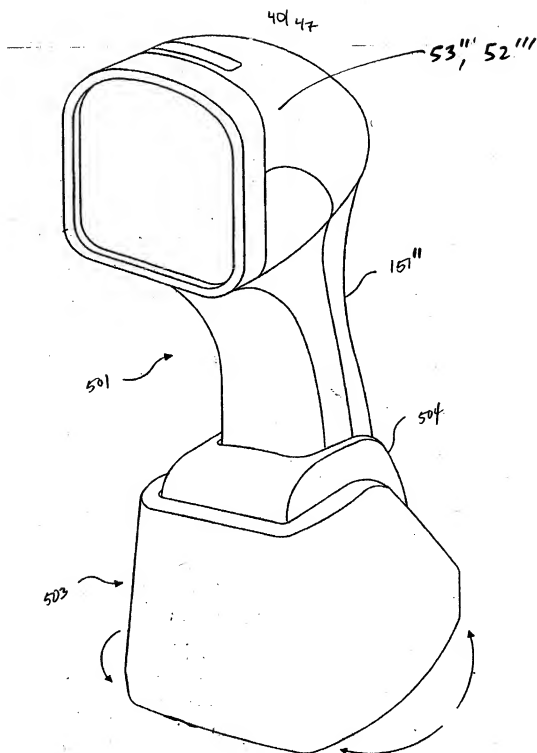
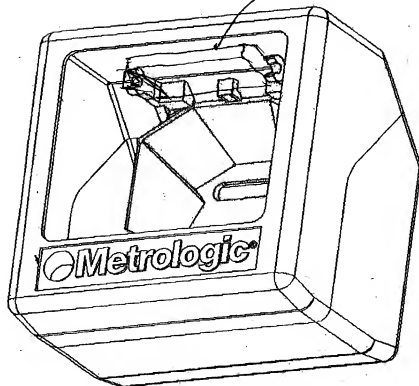


FIG. 17

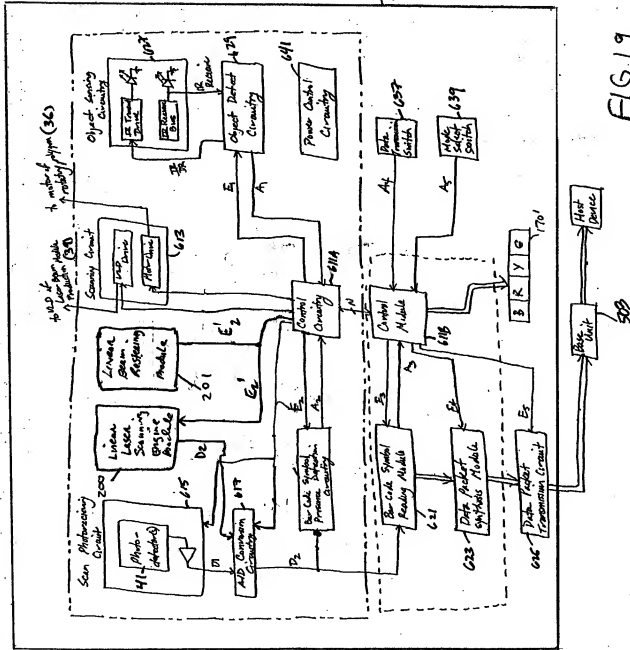
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53", 53"



Device has
omni-directional
multi-directional
and uni-directional
scanning modes of
operation

FIG 18



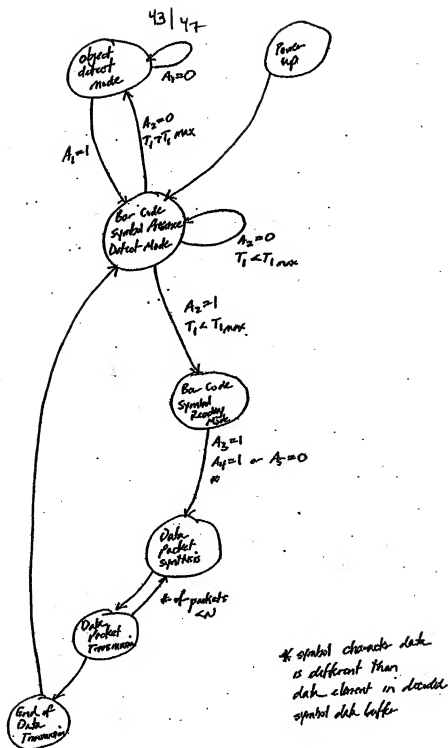


FIG 20

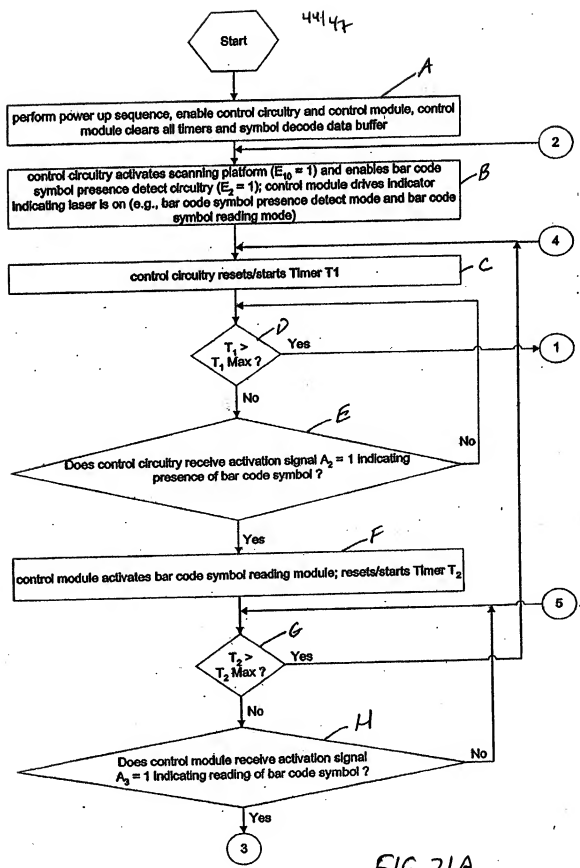


FIG 21A

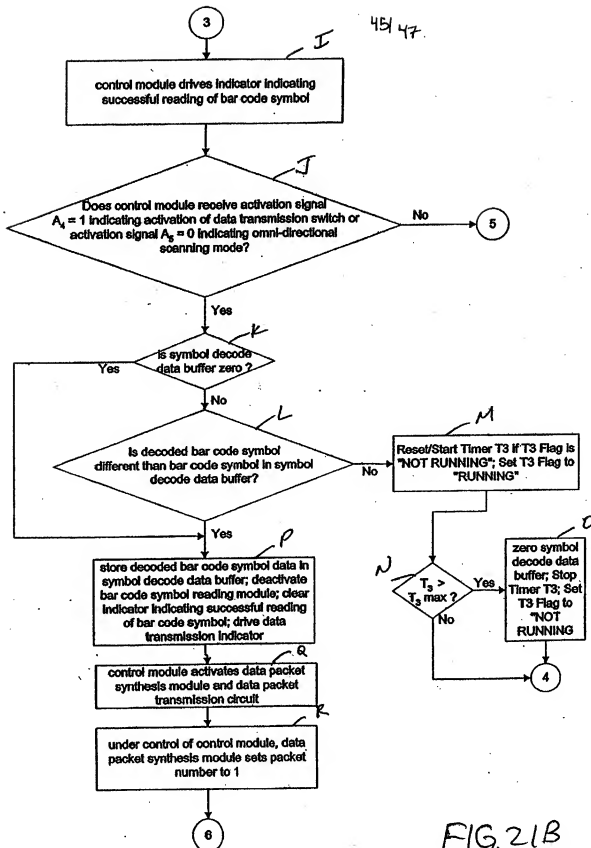


FIG. 21B

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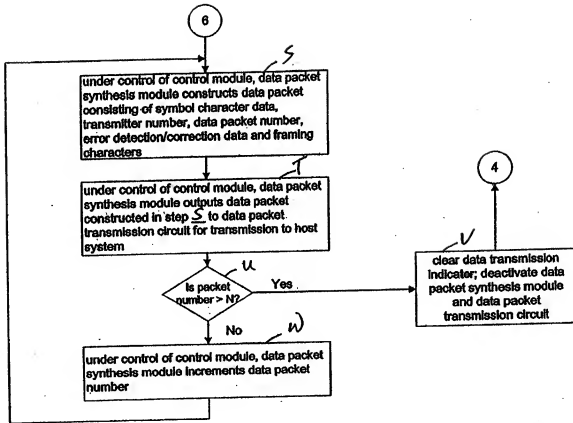


FIG. 21C

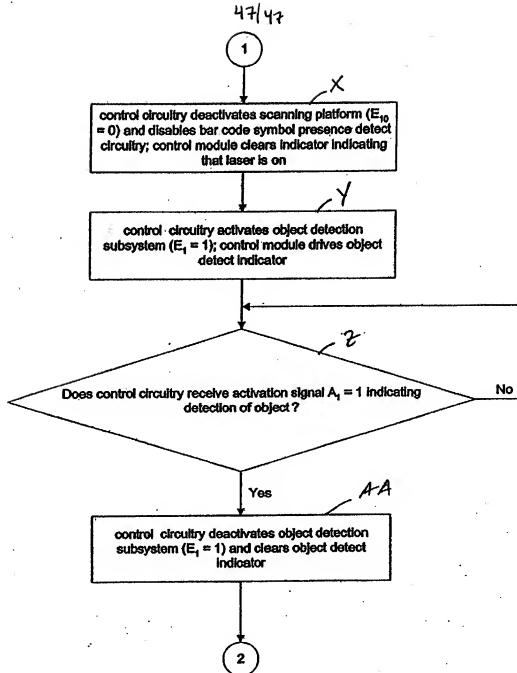


FIG. 21D